High Resolution 37X Zoom Color Camera **SCZ-2370**

User Guide

Before installing and operating this product,
please read this manual thoroughly.

ENGLISH

Thank you for purchasing a **SAMSUNG CCD CAMERA.**
Before operating the camera, confirm the camera model and correct input power voltage. In order to that you can understand this manual thoroughly, we will introduce our model description.

■ SCZ-2370 SERIES

- NTSC MODEL
  SCZ-2370N
  SCZ-2370ND
- PAL MODEL
  SCZ-2370P
  SCZ-2370PD

■ MODEL DESCRIPTION

- SCZ-2370X
  SIGNAL SYSTEM

- SIGNAL SYSTEM
  N → NTSC MODEL
  P → PAL MODEL

The lightning flash with an arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

INFORMATION - This equipment has been tested and found to comply with limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.
Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

WARNING - Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

WARNING : To prevent electric shock and risk of fire hazards:

- ◆ Do NOT use power sources other than that specified.
- ◆ Do NOT expose this appliance to rain or moisture.

This installation should be made by a qualified service person and should conform to all local codes.

Contents

- Features 5
- Warnings & Cautions 6
- Precautions 7
- Components and Accessories 8
- Overview 9
- Connection 11
  - Connecting To Monitor 11
  - Connecting To Power 12
  - Connecting to 8P Control Terminal 12
- Operating Your Camera 14
  - Menu Configuration 14
  - Menu Setup 15
    - · SSDR (Samsung Super Dynamic Range) 16
    - · White Balance (White Bal) 17
    - · BACKLIGHT 18
    - · Motion Detection 19
    - · FOCUS 21
    - · EXPOSURE 26
    - · SPECIAL 30
    - · RESET 38
    - · EXIT 38
- Troubleshooting 39
- Specifications 40
- STW Protocol Command Description 42
- Dimension 48
- MEMO 49

Features

37x Optical Zoom

The built-in SCZ-2370 optical zoom lens is a highly durable component. It features auto focus, auto iris, and zoom functions.

Miscellaneous Functions

HLC(High Light Compensation), SENS-UP, FLIP(H/V-REV), D-ZOOM, SHARPNESS, MOTION DETECTION and PRIVACY functions are provided.

SSNR 3 (Samsung Super Noise Reduction)

The high-performance W-V DSP chip effectively removes low-light gain noise and ghosting to provide clear images even in dark environments.

DIS (Digital Image Stabilizer)

The DIS function compensates for any camera movement, to produce more stable pictures.

Fine Picture Quality under Ultra Low Lighting

1/4" high density CCD allows the user to capture bright, high-quality images under ultra low lighting conditions.

High Resolution

Featuring 600TV line horizontal resolution in color mode and 680TV line horizontal resolution in BW mode, the camera features Sony's 410,000 pixel CCD and captures clean, noiseless, high-quality images.

SSDR (Samsung Super Dynamic Range)

For images with high contrast between bright and dark areas from difficult lighting conditions such as backlighting, this camera selectively illuminates darker areas while retaining the same light level for brighter areas to even out the overall brightness.

DAY&NIGHT(ICR)

This camera has a function that automatically selects the mode that is appropriate for daytime or night-time conditions.
The COLOR mode operates in daytime conditions to provide optimum colors, and BW mode operates in night-time conditions to enhance the definition of the image.

Communication

RS-485, Coaxial communication methods are supported.
- RS-485 Communications
  : SAMSUNG-T, SAMSUNG-E, Pelco-P, Pelco-D, Vicon, Panasonic, Bosch, Honeywell, AD
- Coaxial Communications
  : Pelco Coaxitron

OSD

The camera's OSD is complimented by 18 foreign languages.
- NTSC : Korean, English, French, Spanish, Japanese, Portuguese, Taiwanese
- PAL : English, French, German, Spanish, Italian, Chinese, Russian, Czech, Polish, Portuguese, Romanian, Serbian, Swedish, Danish, Turkish

Samsung Techwin cares for the environment at all product manufacturing stages to preserve the environment, and is taking a number of steps to provide customers with more environment-friendly products.The Eco mark represents Samsung Techwin's will to create environment-friendly products, and indicates that the product satisfies the EU RoHS Directive.

Warnings & Cautions

This information is provided to ensure your safety and to prevent any losses, financial or otherwise. Please read it carefully and use the product accordingly.

* For product inquiries, please contact the retail shop where you bought the camera. The use of equipment such as an aerial ladder while providing after-sales service shall be at your expense.
* Separate the power plug during a thunder storm.
* This product is only part of a surveillance system. Therefore, we can't compensate for material loss and/or personal injuries by robbery, fire, natural disaster or something like this type.

Warning/Attention/Special Mark Messages

	Ignoring this information may result in material loss and/or serious personal injuries including death.		Ignoring this information may result in material loss and/or a slight injuries.
	Indicates "Never Allowed."		Indicates "No Disassembling."

Correct Disposal of This Product
(Waste Electrical & Electronic Equipment)
(Applicable in the European Union and other European countries with separate collection systems)

This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.

Precautions

Do not install under extreme temperature conditions.

Use only under temperature conditions between -10ºC and +50ºC. Provide good ventilation when using in high temperature conditions.

Do not install in high humidity environment.

May lower image quality.

Do not install under unstable lighting conditions.

Severe lighting changes or flickering may hinder normal camera operation.

Avoid touching the camera lens.

The lens is the most important component of the camera. Be careful not to smear it with fingerprints.

Do not drop the camera or subject it to physical shock.

May cause a product malfunction.

Never keep the camera face to strong light directly.

May damage the CCD.

Precautions

Do not expose the camera to rain or other types of liquids.

May cause a product malfunction.Wipe dry any liquids. Liquids may contain minerals that are corrosive to electronic components.

Do not expose the camera to radioactivity.

Radioactivity exposure may damage the CCD.

Notes

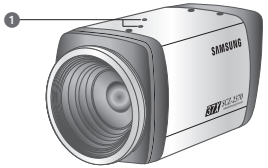
- Exposure to a spotlight or an object emitting strong light may cause smear or blooming.
- Ensure that the power source complies with normal specifications before supplying it to the camera.

Components and Accessories

1. 37x Zoom Color Camera SCZ-2370
2. Instruction Manual
3. 8-PIN CABLE ASSY

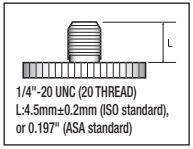
Overview

Top



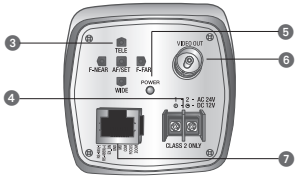
Bottom

1. **Tripod Mounting Bracket Screw Hole**
   Used to fix tripod mounting bracket on top of the camera.
2. **Tripod Mounting Hole**
   Used to install the camera on an optional tripod. The tripod must be equipped with screws with specifications shown on the right.



Attach the bracket to the top of the camera. Use screws included in the package or their equivalent (less than 6mm). Otherwise, the bracket may not assemble to the camera properly.

Bottom View



❸ Key Buttons

Following buttons control zoom, focus, and auto focus functions.

WIDE button : To widen the view. (ZOOM OUT)
TELE button : To close in on a far object. (ZOOM IN)
F-NEAR button : To see a near object clearly.
F-FAR button : To see a far object clearly.

Pressing the 'SET' button locks the zoom control function of these buttons and prompts the main setup menu.

Main setup menu can be navigated using these buttons.

SET : To access the main setup menu.
UP (TELE button) : To move the arrow indicator to up.
DOWN (WIDE button) : To move the arrow indicator to down.
LEFT (F-NEAR button) : To move the arrow indicator to left.
RIGHT (F-FAR button) : To move the arrow indicator to right.

❹ Power Input Terminal

Power supply terminal
DC Type : DC12V±10% DUAL Type : DC12±10%/AC24V±10%

❺ Power LED

Illuminates when power is supplied.

❻ Video Output Jack

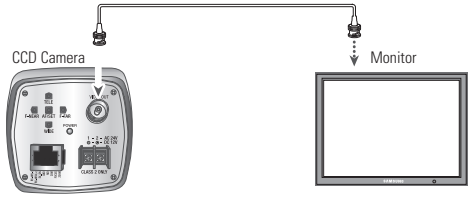
Used to connect an external video monitor in jack.

❼ RJ-45 JACK

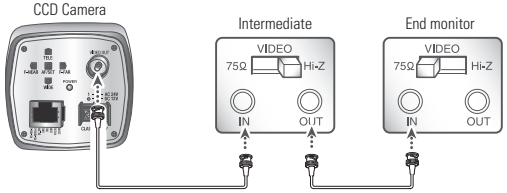
Terminals, such as RS-485 communications, MD OUT, ZOOM, and FOCUS, EX_DN are areincluded.

Connecting to Monitor

Connect Video Out Jack to the monitor's Video In jack as shown below.



- Connection methods may vary depending on the video equipment. Please refer to the model specific instruction manual.
- Connect cables with the unit powered down.
- Set the 75Ω / Hi-Z selection switch as shown below if you have an intermediate device.



Connection

Connecting to Power

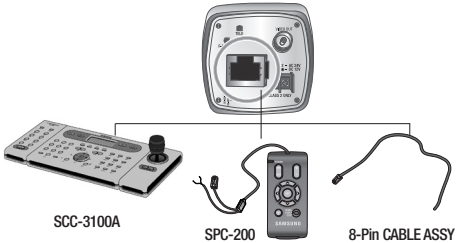
DUAL Type : DC 12V, 500mA / AC24V, 500mA

Notes

- Connect the power once the installation is complete.
- The wire is polarized. Match '+' and '-' terminals properly.

Connecting to 8P Control Terminal

The camera can be controlled by using external controllers like a Remote controller. (RS-485 Communication)



*** 8P Control Terminal Configuration**

Number	Name	Cable color	Description	Number	Name	Cable color	Description
1	ZOOM	ORANGE	-	5	GND	BLUE	-
2	FOCUS	WHITE/ORANGE		6	EX DN	WHITE/BLUE	External D/N
3	COM	GREEN		7	485+	BROWN	RS-485 communication
4	MD OUT	WHITE/GREEN		8	485-	WHITE/BROWN	RS-485 communication

Connector	Function	Signal Level	I/O
ZOOM	Tele	+6V ~ +12V COM	I
	Wide	COM -6V ~ -12V	
FOCUS	Far	+6V ~ +12V COM	I
	Near	COM -6V ~ -12V	
COM		COM	-
MD		0V (There is no motion) — 5±0.5sec — USER Vcc (There is motion)	O
EX DN		DAY mode : D&N terminals must be OPEN to external signals. (Do not input voltage) NIGHT mode : D&N terminal must be connected to the ground	I

Notes

- MD(Motion Detection) Output format is open collector.
- When using the MD function, the 'GND' should be connected to the frame ground.
- Do not simultaneously connect the RS-485 (+) (-) communication line when you use voltage control ZOOM and FOCUS, using the RECEIVER BOX (SRX-100B).

* Match the communication setup between devices when you use the wired controller (SPC-200) or SCC-3100A.

ITEM	SPC-200	SCC-3100A(Factory Default)
MODE	Serial	Serial
Data Bit	8 bit	8 bit
Bit/Sec	9600bps	9600bps
Parity	EVEN	NONE
CAM ID NO.	0	1~255
RETURN PACKET	ENABLE	See the SCC-3100A manual

Notes

- Contact an authorized technician for inspection.

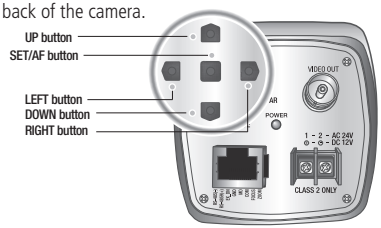
Operating Your Camera

Menu Configuration

MAIN SETUP MENU			
SSDR	●OFF	●ON	
WHITE BAL	●ATW ●OUTDOOR	●MANUAL ●INDOOR	●AWC→SET
BACKLIGHT	●OFF	●BLC	●HLC
MOTION DET	●OFF	●ON	
FOCUS ↵	●MODE ●D-ZOOM ●LENS INIT	●ZOOM TRACK ●ZOOM POS INIT ●RETURN	●ZOOM SPEED ●USER PRESET
EXPOSURE ↵	●BRIGHTNESS ●AGC ●RETURN	●IRIS ●SSNR3	●SHUTTER ●SENS-UP
SPECIAL ↵	●PRIVACY ●SYNC ●MONITOR	●DAY/NIGHT ●COMM ADJ ●DISPLAY	●DIS ●IMAGE ADJ ●RETURN
RESET			
EXIT			

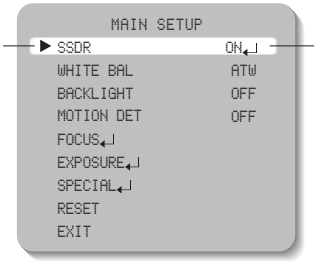
Menu Setup

Use the five buttons on back of the camera.



1. Press the SET button for 2 seconds. (Short-pressing the button activates the AUTO FOCUS).
   • Main setup menu is displayed on the monitor screen.

Select feature using the UP or DOWN button.



Change the status using the LEFT or RIGHT button.

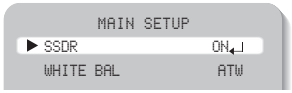
2. Select the desired feature using the UP or DOWN button.
   • Each pressing of the UP or DOWN button moves the indicator to the next or previous feature.
   • Move the arrow indicator to the desired feature item.
3. Change the status of the selected feature using the LEFT or RIGHT button.
4. When completed, move the arrow indicator to 'EXIT' and press the SET button.

Notes

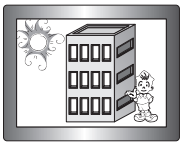
- **Features marked with a ↵ have an accessible submenu.**
- **Access the submenu by pressing the SET button.**

SSDR (Samsung Super Dynamic Range)

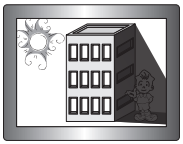
SSDR illuminates darker spots of an image while retaining the same light level for brighter spots to even out the overall brightness of images with high contrast between bright and dark spots.



1. When the SETUP menu screen is displayed, select 'SSDR' by using the button so that the arrow indicates 'SSDR'.
2. Use the button to change the SSDR level according to the contrast between bright and dark areas.



SSDR ON

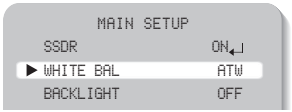


SSDR OFF

White Balance (White Bal)

Use the White Balance function to adjust the screen color.

1. When the SETUP menu screen is displayed, select 'White Bal' by using the Up and Down buttons so that the arrow indicates 'White Bal' .
2. Select a desired mode using the Up and Down buttons.



※ Select one of the following 5 modes, as appropriate for your purpose.

- ATW : Select this when the color temperature is between 1,800°K and 10,500°K.
- MANUAL : Select this to fine-tune White Balance manually. Set White Balance first by using the ATW or AWC mode. After that switch to MANUAL mode, fine-tune the White Balance and then press the Function Setup switch.
- AWC→SET : To find the optimal luminance level for the current environment, point the camera towards a sheet of white paper and press the Function Setup switch. If the environment changes, readjust it.
- OUTDOOR : Select this when the color temperature is between 1,700°K and 11,000°K. (sodium light inclusion)
- INDOOR : Select this when the color temperature is between 4,500°K and 8,500°K.

Notes

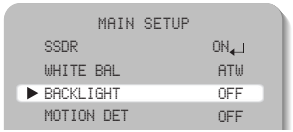
- White Balance may not work properly under the following conditions. In this case select the AWC mode.

❶ When the color temperature of the environment surrounding the subject is out of the control range (e.g. clear sky or sunset).
❷ When the ambient illumination of the subject is dim.
❸ If the camera is directed towards a fluorescent light or is installed in a place where illumination changes dramatically, the White Balance operation may become unstable.

BACKLIGHT

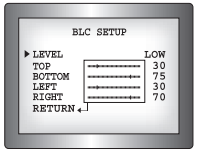
Unlike conventional cameras, the SCZ-2370 is designed to deliver a distinctive subject and background at the same time, even when the subject is backlight, by using the features of the proprietary W-V DSP chip.

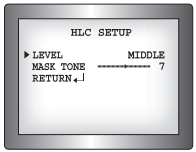
1. When the SETUP menu screen is displayed, select 'BACKLIGHT' by using the Up and Down buttons so that the arrow indicates 'BACKLIGHT'.



2. Select a desired mode using the Left and Right buttons depending on the camera purpose.
   - OFF : Not being used
   - BLC : Enables a user to directly select a desired area from a picture, and to view the area more clearly.
   - HLC (High Light Compensation) :
     If the scene contains extremely bright light areas such as; from car headlight, the light can mask out much of the on-screen detail.
     - LEVEL : Adjust level of the HLC function.(LOW,MIDDLE,HIGH)
     - MASK TONE : Change the brightness
     - LIMIT : Enable to change the operating condition.

3. Select a desired mode using the Left and Right button and press the SET button.
   - Select 'BLC' to adjust the area to be enhanced then adjust the level.
   - HLC : Enable the user to change the level, mask tone area.



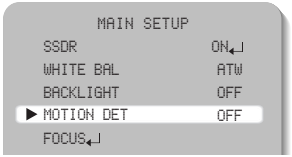


Notes

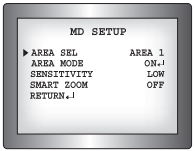
- For effective viewing of license plates, there is a minimum required illumination and the shutter speed needs to be faster than 1/200sec.
- Because there can be a difference in the effectiveness of HLC according to the amount of light area in the screen, optimize the installation angle for the best HLC performance.
- When dark, the HLC is only activated when a bright light exceeding a specific size. (In NIGHT ONLY mode.)
- The HLC is not activated in day light or when bright light is not present at night. (In NIGHT ONLY mode.)
- The HLC is not activated when the D-ZOOM mode is 'ON' or DIS mode is 'ON'.

Motion Detection

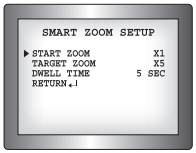
This product has a feature that will detect movements of objects in 8 different areas on the screen. The camera detects an object's movement by sensing disparity of outline, brightness levels and color. The camera sends a detection signal out via the MD output terminal and will zoom into a pre-determined point.



1. Please press the SETUP button.
   - OFF : MOTION DETECTION mode is cancelled.
   - ON : Any motion in the selected areas is observed.
   - AREA SEL : You can select the area you wish to observe from the 8 area.
   - AREA MODE : Determines whether to use the MD area selected in SENSITIVITY
   - SENSITIVITY : You can select low or high level. When SENSITIVITY is high, motion detection sensitivity is increased to recognize even small movement



• SMART ZOOM : Smart zoom is operated in connection with MOTION DETECTION. When the SMART ZOOM function is 'ON' while the MOTION DETECTION mode is 'ON', the zoom goes to the TARGET ZOOM position once motion is detected. Once the zoom action is finished and 'DWELL TIME' has passed, the zoom returns to the 'START ZOOM' position.



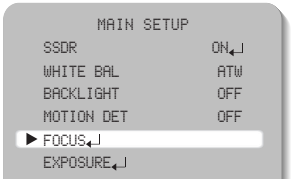
- START ZOOM : By moving the left or right button in the 'START ZOOM' item to select the zoom position from 1x to 37x to be returned after the 'SMART ZOOM' action is over.
- TARGET ZOOM : Use the left or right button in the 'TARGET ZOOM' item to select the zoom position from 1x to 37x to be used during MOTION DETECTION.
- DWELL TIME : Use the left or right button in the 'DWELL TIME' item to select a time between 5 and 60 seconds for the dwell time before the zoom is returned to the 'START ZOOM' position. (5,7,10,15,20,30,40,60 sec)

Notes

Tips on Using the Motion Detection Feature

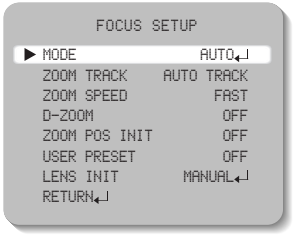
- The feature may not function properly under flickering light conditions.
- The camera interprets sudden changes in lighting and subsequent change in brightness of an object as motion.
- With the feature enabled, other algorithms may require additional time to operate.
- This system does not guarantee prevention of fire or theft. The manufacturer shall not be held responsible for any accident or damage incurred.

FOCUS



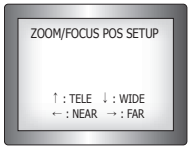
1. Press the SET button to access the main setup menu and then position the indicator over FOCUS using the UP or DOWN button.
2. Press the SET button.

➲ MODE : You can select the most suitable zoom mode. Move the arrow indicator to 'MODE' using UP or DOWN button.



- AUTO : Select AUTO and press the SET button to confirm. Increase or decrease optical zoom (ZOOM) or digital zoom (D-ZOOM) positions using the UP or DOWN button while verifying the changes on screen. Enabling D-ZOOM (ON) means that digital zoom will activate once optical zoom ends. The focus automatically adjusts when the lens zooms in and out.

- ONE PUSH : Focus is automatically adjusted just once, after zoom position is changed. Select 'ONE PUSH' and the SET button to confirm. Increase or decrease optical zoom (ZOOM) or digital zoom (D-ZOOM) positions using the directional buttons while verifying the changes on screen. Press the SET button once the desired image quality is obtained.

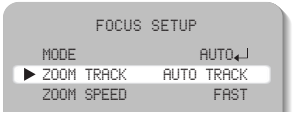


- MANUAL : Select 'MANUAL' and press the SET button to confirm. Increase or decrease optical zoom (ZOOM) or digital zoom (D-ZOOM) positions moving directional buttons while verifying the changes on screen. Press the SET button once desired image quality is obtained. Focus can be manually adjusted, independent of moving zoom.

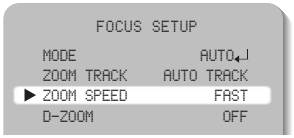
➲ ZOOM TRACK : Select 'ON' for the 'SMART ZOOM' item in the MOTION DETECTION menu and press SET button to change the settings for the 'SMART ZOOM' function.

Use the left or right button in the 'ZOOM' item to select 'AUTOTRACK' or 'TRACK' and press SET button to activate the zoom action focus function.

- AUTO TRACK : Zooming in while deciding or adjusting the status of the focus.
- TRACK : The camera moves the focus track which is established.
- OFF : Only the zoom lens moves.

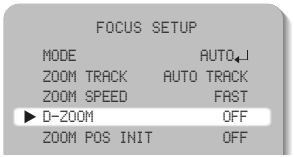


➲ ZOOM SPEED : Configure zoom tracing speed using this feature. Position the indicator over 'ZOOM SPEED' using the UP or DOWN button and then set to desired mode using the LEFT or RIGHT button.

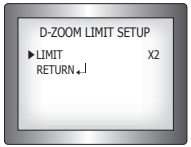


- FAST : To move zoom fast.
- SLOW : To move zoom slowly.
- MEDIUM : To move zoom at medium speed.

➲ D-ZOOM : Configure magnification limit from x2~x16 using this feature. Position the indicator over 'D-ZOOM' using the UP or DOWN button Set 'D-ZOOM' to 'ON' and press the SET button to confirm.



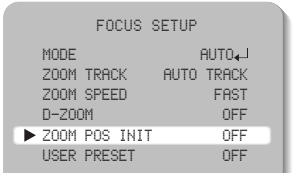
- Set 'ZOOM LIMIT' to the desired level using the LEFT or RIGHT button.



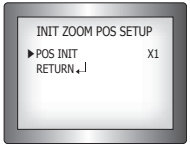
Notes

- When the DIS is enabled, you cannot use the D-ZOOM.

➲ ZOOM POS INIT : Moves to the controlled ZOOM position when the power is truned on and the initial ZOOM position has been set.



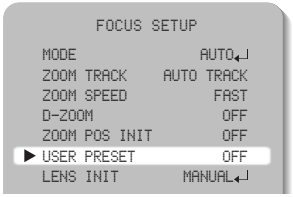
- AUTO : If you turn the power off and on, the zoom magnification level is set to the previous level that was set before the power went off.
- MANUAL : The zoom magnification level can be set from 1x to 37X.



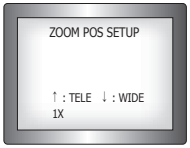
Notes

- The zoom postion is saved after 5 seconds when you set zoom function.

➲ USER PRESET : Preset user-designated configurations using this feature. Position the indicator over 'USER PRESET' using the UP or DOWN button and then set to 'ON' using the LEFT or RIGHT button. Press the SET button to confirm.

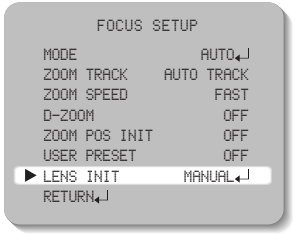


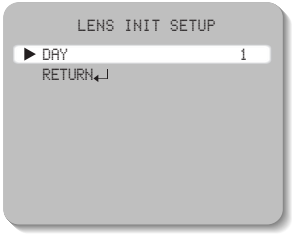
- PRESET NO : Up to 128 preset configuratons are supported.
- SAVE : Save configured preset.
- CLEAR : Clear configured preset.
- RETURN : Revert to the FOCUS SETUP menu.



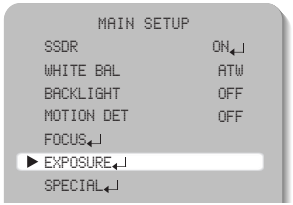
➲ LENS INIT : Use the left or right button in the 'Lens initialization' item select 'Automatic' or 'Manual' and then press the SET button.

- AUTO : The lens can automatically be set by a pre-selected day, from 1-day to 7-days. This will start from when the time is set.
- Manual : The Lens will reset when you press the SET button.



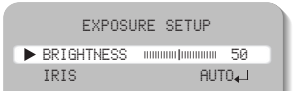


EXPOSURE

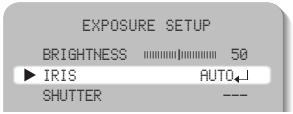


1. Press the SET button to access the main setup menu and then position the indicator over 'EXPOSURE' using the UP or DOWN button.
2. Press the SET button to confirm.

➲ BR IGHTNESS : Use this feature to adjust image brightness. Position the indicator over 'BRIGHTNESS' using the UP or DOWN button. Then increase or decrease brightness level using the LEFT or RIGHT button while verifying the changes on screen. Set END once desired level is obtained.



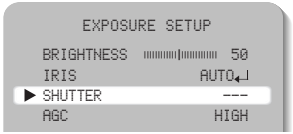
➲ IRIS : Set 'IRIS' to 'AUTO' or 'MANUAL'. Position the indicator over 'IRIS' using the UP or DOWN button and then select the desired iris mode using the LEFT or RIGHT button.



- AUTO : The iris is automatically activated upon illumination.
- MANUAL : Manual iris configuration. Set 'IRIS' to 'MANUAL' using the LEFT or RIGHT button and then press the SET button. Increase or decrease iris level using the LEFT or RIGHT button while verifying the changes on screen.

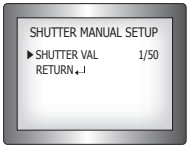
➲ SHUTTER : Control image brightness by adjusting shutter speed.

❶ Position the indicator over 'SHUTTER' using the UP or DOWN button. Then select the desired shutter mode (A.FLK, ESC, MANUAL) using the LEFT or RIGHT button.



- MANUAL : Manual shutter speed setting.
- A.FLK (NTSC: 1/100, PAL: 1/120) : Flicker-free mode.
- ESC : Automatic shutter speed setting (optimal).
  Auto operation is possible only when the IRIS is set to MANUAL.

❷ If you choose 'MANUAL', select the optimal shutter speed.
- In MANUAL mode, the optimal shutter speed needs to be designated. Select from 1/60 to 1/120,000 (NTSC) or from 1/50 to 1/120,000 (PAL). * 'Sens-Up' mode can be configured manually (2x to 512x).
- Verify changes made to the shutter speed by referencing to changes the 'on-screen' brightness.



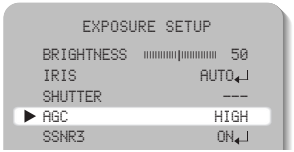
❸ Press the SET button to complete.

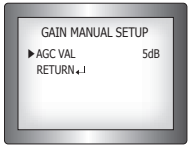
Notes

- Image may become unstable if the camera is set to 'ESC' mode and faces a strong fluorescent light.
- Under 'ESC' mode, the brightness can be adjusted using the LEFT or RIGHT button.

➲ AGC (Auto Gain Control) : For brighter images.

1. Position the indicator over 'AGC' using the UP or DOWN button.
2. Set 'AGC' to the desired mode using the LEFT or RIGHT button.
   - HIGH : Wide range gain value adjustment
   - MANUAL : Selecting gain value range. (5dB ~ 41dB)
   - OFF : Disabled
   - LOW : Narrow range gain value adjustment
   - MEDIUM : MEDIUM range gain value adjustment





➲ SSNR(Samsung Super Noise Reduction): On screen noise reduction.

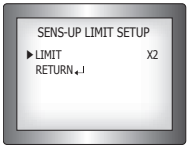
1. Position the indicator over 'SSNR' using the UP or DOWN button.
2. Set 'SSNR' to the desired mode using the LEFT or RIGHT button.
   - LOW : Low noise reduction
   - MEDIUM : Medium noise reduction
   - HIGH : High noise reduction
   - OFF : Disabled

Notes

- Changing the 'AGC' setting from LOW to HIGH results in greater sensitivity, as well as on screen noise.
- Setting 'AGC' to OFF locks 'SSNR3' configuration.

➲ SENS-UP : This feature ensures clear images at night or under low light conditions.

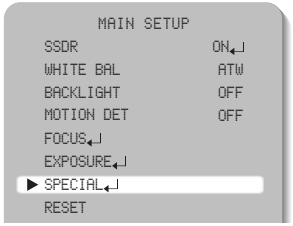
1. Position the indicator over 'SENS-UP' using the UP or DOWN button.
2. Set 'SENS-UP' to the desired mode using the LEFT or RIGHT button.
   - AUTO : Select this mode for use in night time or under low light conditions.
   - OFF : Disabled



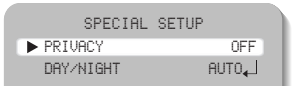
Notes

- Once 'AUTO' mode is set, the user can configure the SENS-UP limit by increasing/ decreasing the shutter speed (e.g.: X2, X4..... X32, X64, X128, X256, X512).
- Enabling Sens-Up increases camera sensitivity and may result in additional noise and/or other phenomenons. This is normal.

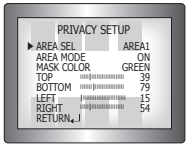
SPECIAL



1. Press the SET button to access the main setup menu and then position the indicator over 'SPECIAL' using the UP or DOWN button.
2. Press the SET button to confirm.
   - PRIVACY : Hide an area you want to hide on the screen.

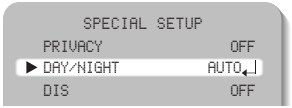


❶ When the SPECIAL menu screen is displayed, using the UP or DOWN button so that the arrow indicates 'PRIVACY'.



❷ Set up the mode using the 4 direction buttons.
- AREA SEL : You can select up to 12 areas.
- AREA MODE : Determines whether to use the area selected in the AREA SEL.
- MASK COLOR : Determine area color. You can select Green, Red, Blue, Black, White, Gray.

- DAY/NIGHT : You can display pictures in color or black and white.



❶ When the SETUP menu screen is displayed, select 'DAY/NIGHT' using the UP or DOWN button so that the arrow indicates 'DAY/NIGHT'.

❷ Select a desired mode using the LEFT or RIGHT button according to the picture display you want.
- AUTO : The mode is switched to 'Color' in a normal environment, but switches to 'B/W' mode when ambient illumination is low. To set up the switching time or speed for AUTO mode, press the SET button.
- COLOR : The picture is always displayed in color.
- B/W : The picture is always displayed in black and white.

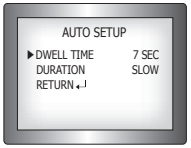
• DWELL TIME : You can select tday/night switching delay time from.
→ 5,7,10,15,20,30,40, 60(sec)

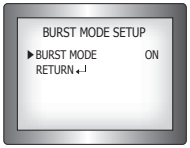
• DURATION : You can select the day/night switching point(lux).

	Color → B/W	B/W → Color
Fast	2.6Lux	4.2Lux
Slow	1.2Lux	6.0Lux

※ When AGC is middle mode.

EXT : This mode allows you to apply a desired filter to external signals.

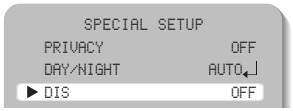




Notes

- When using a Video Auto Iris Lens, if you set the lens level to low, automatic switching between Color and Black & White may not occur.
- You cannot control the DAY/NIGHT menu when AGC in the EXPOSURE menu is 'OFF'. At this time, the exchange between DAY mode and NIGHT mode operates as like selecting 'COLOR' mode.
- The OSD key does not work for 3 seconds when switching to Color or B/W, to ensure stable camera operation.
- The camera may focus less well under infrared illumination than under normal illumination.
- Since the camera may not focus as well under infrared illumination at night as it does under normal illumination, install an Extra-low Dispersion Lens to obtain sharp pictures.
- The brightness of illumination is changeable by installed environment.

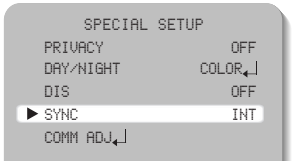
⊃ DIS : The DIS mode can compensate for vibration of the camera.



Notes

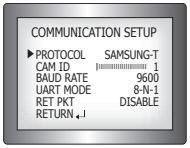
- When DIS is operating, D-ZOOM does not operate.

⊃ SYNC : Two synchronization modes are available INTERNAL and EXTERNAL LINE-LOCK. In LINE-LOCK mode, it synchronizes the camera's video out signal to the external SYNC signal.



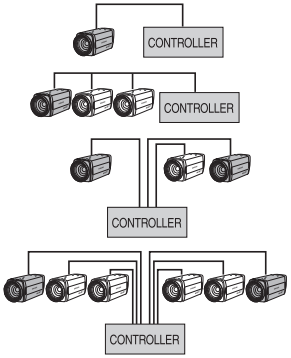
- INT : Internal synchronization
- LL : External line-lock synchronization
  - · If you choose 'LL', you can adjust the desired phase. Press the SET button.
  - · You can adjust the desired phase from 0 to 359.

⊃ COMM ADJ (Communication Adjustment) :
This function sets up the camera communication status when controlling the camera through an external controlled device.



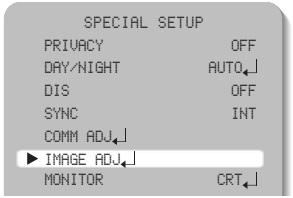
❶ When the SPECIAL menu screen is displayed, using the UP or DOWN button so that the arrow indicates 'COMM ADJ'.

❷ Set up the mode moving the 4 direction of the SET button.
- CAM ID : Determines the camera's identification number (between 0 and 255).
- Protocol : Select the communication PROTOCOL. (SAMSUNG-T/PELCO-D/PELCO-P/ BOSCH/HONEYWELL/VICON/AD/SAMSUNG-E/PANASONIC)
- BAUD RATE : You can select 2400/4800/9600/19200/38400/57600 bps.
- UART MODE : You can select NONE, EVEN or ODD for the parity bits.



- RET PKT : You can choose whether to send an ACK signal when the communication control command is issued to the camera.

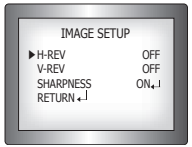
➲ IMAGE ADJ : Includes image quality or special function factors.

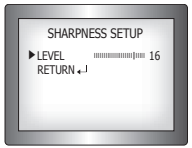


❶ When the SETUP menu screen is displayed, select 'IMAGE ADJ.' using the UP or DOWN button so that the arrow indicates 'IMAGE ADJ.

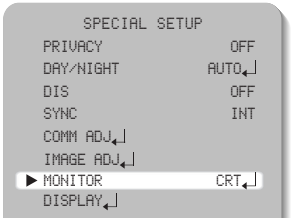
❷ Select a desired mode using the LEFT or RIGHT button.

- H-REV : You can flip the picture horizontally on the screen.
- V-REV : You can flip the picture vertically on the screen.
- SHARPNESS : As you increase this value, the picture outline becomes stronger and clearer.

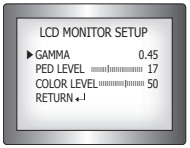




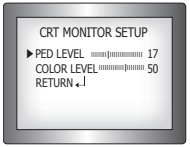
➲ Monitor : Please change the settings value of video appropriate to your monitor.



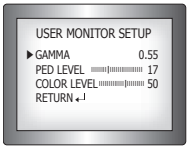
- LCD : Please select this menu item when using an LCD monitor.



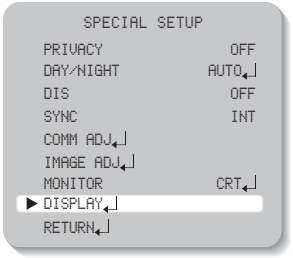
- CRT : Please select this menu item when using a CRT monitor.



- USER : Please use this menu item when using a monitor other than standard ones. You can change the gamma, PED level, and color gain in the sub menus.



➲ DISPLAY : Use this feature to designate a name for the camera, which will display on the monitor screen.



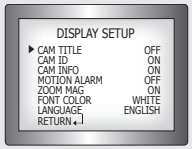
➲ CAM TITLE

❶ Press the SET button to display the main setup menu and move the arrow indicator to 'CAM TITLE' using the UP or DOWN button.

❷ Set 'CAM TITLE' to 'ON' using the UP or DOWN button.

Notes

- If the CAM TITLE feature is set to 'OFF', the name will not displayed in the monitor



❸ Press the SET button.

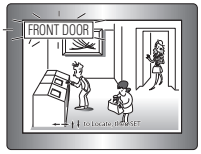
❹ You can enter up to 15 characters.

a. Move the cursor to the character entry field using the LEFT or RIGHT button.
b. Use the 4 direction of buttons to select a desired character.
c. Press the SET button to confirm the selection of the blinking character. The character is then saved, and the cursor in the entry field moves to the next position.
d. Repeat steps 'a' through 'c' until the desired name has been entered.

Notes

- Correcting Mistakes
  Move the cursor th 'CLR' and press the SET button to clear the entire entry. To modify one character, use LEFT or RIGHT to position the cursor above the character to be modified and click the SET button after selecting the character to enter.

❺ Enter a title, move the cursor to 'POS' and press the SET button. The entered title appears on the screen. Select the position to display the title on the screen by moving the 4 direction buttons and press the SET button. When the position is determined, select.



- CAM ID : Displays camera ID on top left corner of the screen.
- CAM INFO : Displays camera information on screen.
- MOTION ALARM : You can toggle the use of the camera alarm.
- ZOOM MAG : Use th is feature to display the current zoom magnification level on screen. Position the indicator over 'ZOOM MAG' using the UP or DOWN button. Then set to ON using the LEFT or RIGHT button.
- FONT COLOR : You can select the font color(white,yellow,green,red,blue)
- LANGUAGE : You can select the menu language according to your requirements (Korean, ESPANOL, FRANCAIS, ITALIANO, DEUTSCH, ENGLISH, Japanese, Chinese, RUSSIAN, CESKY, POLSKI, PORTUGUESE,Taiwanese, Romanian, Serbian, Swedish, Danish, Turkish)
- END : Select this to save the SPECIAL menu settings and return to the SPECIAL menu.

RESET

To reset your camera to factory default condition.

EXIT

To finish setup menu.

If you have trouble operating your camera, refer to the following table.
If the guidelines do not enable you to solve the problem, contact an authorized technician.

- **Nothing appears on the screen.**
  - ▶ Check that the power cord and line connection between the camera and monitor are fixed properly.
  - ▶ Check that you have properly connected VIDEO cable to the camera VIDEO output jack.
- **The image on the screen is dim.**
  - ▶ Is lens stained with dirt? Clean your lens with soft, clean cloth.
  - ▶ Set the monitor to proper condition.
  - ▶ If the camera is exposed to too strong light, change the camera position.
- **The image on the screen is dark.**
  - ▶ Adjust the contrast feature of the monitor.
  - ▶ If you have an intermediate device, set the 75Ω / Hi-z properly.
- **The camera is not working properly, and the surface of the camera is hot.**
  - ▶ Check that you have properly connected the camera to an appropriate power source.
- **The SENS-UP function does not work.**
  - ▶ Check that AGC of EXPOSURE SETUP menu is 'OFF'.
  - ▶ Check that SHUTTER of EXPOSURE SETUP menu is 'A.FLK' or 'MANUAL'.
- **The Motion Detection function does not work.**
  - ▶ Check that MOTION DET of SPECIAL SETUP menu is 'OFF'.
- **Color is not correct.**
  - ▶ Check the setting of WHITE BAL SETUP menu .
- **The screen flickers continually.**
  - ▶ Check that direction of camera turns toward the Sun.
- **When coaxial communication is not available:**
  - ▶ Make sure that the camera and monitor are installed within the recommended distance.
  - ▶ Use the video amplifier equivalent to coaxitron if the recommended installation distance is exceeded.

Specifications

	SCZ-2370N / 2370ND	SCZ-2370P / 2370PD
POWER		
Input Voltage	AC 24V(±10%) , DC 12V(±10%)	
Input Current	480mA: Max. (Zoom,Focus, Day&night motor operating) (at 12V/24V)	
Power Consumption	4.8W: Max. (Zoom, Focus, Day & night motor operating, at 12V / 24V)	
CCD		
Size	1/4 inch, Super HAD color CCD	
Total Pixels	811(H) x 508(V)	795(H) x 596(V)
Effective Pixels	768(H) x 494(V)	752(H) x 582(V)
OPTICS		
Optics	37X f=3.5mm(WIDE) ~ 129.5mm(TELE) / F1.6 ~F3.9	
Min. Focus Distance	1,500mm(TELE)	
D. ZOOM	OFF/ON (Limit 16x)	
Angle Field of view	H : Appr. 55.5°(Wide) to 1.59°(Tele) / V : Appr. 42.5°(Wide) to 1.19°(Tele)	
SYNC		
Scanning System	2:1 Interlace	
Synchronization	Internal / Line-Lock	
Frequency	H :15.734 KHz / V : 59.94 Hz	H : 15.625 KHz / V : 50.00 Hz
ELECTRICAL		
Resolution	600TV Lines(Min.) : Color / 680TV Lines(Min.) : B/W	
Min. Illumination	Color : 0.2 Lux/F1.67 (50 IRE) / B/W : 0.02 Lux/F1.67 (50 IRE)	
S/N (Y signal)	52 dB (AGC Off,Weight ON)	
Video Output	CVBS : 1.0Vp-p/75Ω	
Focus	Auto / Manual / One push	
Zoom Movement Speed	2.8 sec : Wide to Tele	
IRIS Control	Auto,Manual	
Lens Initialize	Built-In	
Camera Title	OFF / ON (Displayed 15 characters)	
Camera ID	255 ID Selectable	
Day & Night	Auto / COLOR / B/W / EXT	
Gain Control	LOW / MEDIUM / HIGH / MANUAL / OFF	

White Balance	ATW / AWC / MANUAL / INDOOR / OUTDOOR (1,700k ~ 11,000K)	
Back Light Compensation	SSDR / BLC / HLC / OFF	
SHUTTER	ESC/FLK/MANUAL(1/60(PAL 1/50)~1/120K sec, x2 ~ x512 sec)	
O.S.D	Korean, English, Japanese, Spanish, French, Portuguese, Taiwanese	English, Spanish, French, Italian, German, Polish, Russian, Czech, Chinese, Portuguese, Romanian, Serbian, Swedish, Danish, Turkish
Motion Detection	ON/OFF (output via communication),(8 Area)	
Control output	RS-485 TTL Level (2400,4800,9600,19200,38400,57600bps)	
SSNR3	LOW / MEDIUM / HIGH / OFF	
Protocol	SAMSUNG-T, SAMSUNG-E, PELCO-D, PELCO-P, BOSCH, HONEYWELL, VICON, AD, PANASONIC	
SENSUP	Auto / Off (Selectable x2 ~ x512)	
Privacy Function	ON / OFF(12 Areas)	
FLIP	ON / OFF	
MIRROR	ON / OFF	
PRESET	ON / OFF(128 Point)	
ENVIRONMENTAL		
Operating Temperature / Humidity	-10°C to +50°C / 20% to 80% RH	
Storge Temperature/Humidity	-20°C to +60°C / 20% to 95% RH	
MECHANICAL		
Dimension	67.6(W) x 67.6(H) x 122.2(D) mm (DC Type) / 67.6(W) x 67.6(H) x 147.7(D) mm	
Weight	415g (DC Type) / 520g (Dual Type)	

※ **The specification for this product may change without prior notice for product improvement.**

STW Protocol Command Description

		Byte1	Byte2	Byte3	B yte4 ll Byte5	Byte 6	Byte7	Byte8	Byte9	Byte10	Byte11
Command Name	Command Packet	STX	CAM ID	HOST ADDR	CAMMAND	DATA3	DATA4	DATA5	DATA6	ETX	CHECKSUM
	Return Packet	STX	CAM ID	HOST ADDR	CAMMAND	DATA3	DATA4	DATA5	DATA6	ETX	CHECKSUM
	Checksum	CHECKSUM CALCULATION : UNARY OPERATION OF SUMMAT ION FROM BYTE2 TO BYTE9.									
		EX) CHECKSUM = ~(BYTE2+BYTE3+... +BYTE8+ BYTE9);									
Reset	Function	Reset all data to factory default value.									
	Command Packet	A0h	CAM ID	HOST ADDR	000Fh	00h	00h	00h	00h	AFh	CHECK SUM
	Return Packet	A0h	CAM ID	HOST ADDR	000Fh	00h	00h	00h	00h	AFh	CHECK SUM
Focus Far	Function	Move focus lens to far direction.									
	Command Packet	A0h	CAM ID	HOST ADDR	0100h	00h	00h	00h	00h	AFh	CHECK SUM
	Return Packet	A0h	CAM ID	HOST ADDR	0100h	00h	00h	00h	00h	AFh	CHECK SUM
Focus Near	Function	Move focus lens to near direction.									
	Command Packet	A0h	CAM ID	HOST ADDR	0200h	00h	00h	00h	00h	AFh	CHECK SUM
	Return Packet	A0h	CAM ID	HOST ADDR	0200h	00h	00h	00h	00h	AFh	CHECK SUM
Zoom Wide	Function	Move zoom lens to wide direction.									
	Command Packet	A0h	CAM ID	HOST ADDR	0040h	00h	00h	00h	00h	AFh	CHECK SUM
	Return Packet	A0h	CAM ID	HOST ADDR	0040h	00h	00h	00h	00h	AFh	CHECK SUM
Zoom Tele	Function										
	Command Packet	A0h	CAM ID	HOST ADDR	0020h	00h	00h	00h	00h	AFh	CHECK SUM
	Return Packet	A0h	CAM ID	HOST ADDR	0020h	00h	00h	00h	00h	AFh	CHECK SUM
ZOOM Direct	Function										
	Command Packet	A0h	CAM ID	HOST ADDR	00FFh	P1	P2	P3	00h	AFh	CHECK SUM
	Return Packet	A0h	CAM ID	HOST ADDR	00FFh	P1	P2	P3	00h	AFh	CHECK SUM
	Parameter	P1, P2 : OPTICAL ZOOM = 0000h~06EAh									
		P3 : DIGITAL ZOOM = ((256*10)/Ratio)-1									
		EX) D-ZOOM 1.1x : P3 = E7h = ((256*10)/11)-1, Ratio 11 me ans 1.1x.									
		D-ZOOM 2.0x : P3 = 7Fh = ((256*10)/20)-1, Ratio 20 me ans 2.0x.									
AF Stop	Function	Stop zoom & focus lens moving.									
	Command Packet	A0h	CAM ID	HOST ADDR	0000h	00h	00h	00h	00h	AFh	CHECK SUM
	Return Packet	A0h	CAM ID	HOST ADDR	0000h	00h	00h	00h	00h	AFh	CHECK SUM
One push AF	Function	Unconditionally execute auto focus.									
	Command Packet	A0h	CAM ID	HOST ADDR	0045h	00h	00h	00h	00h	AFh	CHECK SUM
	Return Packet	A0h	CAM ID	HOST ADDR	0045h	00h	00h	00h	00h	AFh	CHECK SUM

STW Protocol Command Description

User Preset Save	Function	Save current user preset configuration information.									
	Command Packet	A0h	CAM ID	HOST ADDR	0003h	P1	00h	00h	00h	Afh	CHECK SUM
	Return Packet	A0h	CAM ID	HOST ADDR	0003h	P1	00h	00h	00h	Afh	CHECK SUM
	Parameter	P1:00h(USER PRESET 1) ~ 80h(USER PRES ET 128)									
User Preset Exec.	Function	Execute selected user preset.									
	Command Packet	A0h	CAM ID	HOST ADDR	0007h	P1	00h	00h	00h	Afh	CHECK SUM
	Return Packet	A0h	CAM ID	HOST ADDR	0007h	P1	00h	00h	00h	Afh	CHECK SUM
	Parameter	P1:00h(USER PRESET 1) ~ 80h(USER PRES ET 128)									
User Preset Clear	Function	Clear selected user preset.									
	Command Packet	A0h	CAM ID	HOST ADDR	0005h	P1	00h	00h	00h	Afh	CHECK SUM
	Return Packet	A0h	CAM ID	HOST ADDR	0005h	P1	00h	00h	00h	Afh	CHECK SUM
	Parameter	P1:00h(USER PRESET 1) ~ 80h(USER PRES ET 128)									
OSD Menu On/Off	Function	Display OSD menu on the screen. Clear OSD menu and save current menu setup.									
	Command Packet	A0h	CAM ID	HOST ADDR	00B1h	P1	00h	00h	00h	Afh	CHECK SUM
	Return Packet	A0h	CAM ID	HOST ADDR	00B1h	P1	00h	00h	00h	Afh	CHECK SUM
	Parameter	P1 : 00h = ON 01h = OFF									

STW Protocol Command Description

OSD Menu Up	Function	Move OSD arrow to up.									
	Command Packet	A0h	CAM ID	HOST ADDR	0008h	00h	00h	00h	00h	AFh	CHECK SUM
	Return Packet	A0h	CAM ID	HOST ADDR	0008h	00h	00h	00h	00h	AFh	CHECK SUM
OSD Menu Down	Function	Move OSD arrow to down.									
	Command Packet	A0h	CAM ID	HOST ADDR	0010h	00h	00h	00h	00h	AFh	CHECK SUM
	Return Packet	A0h	CAM ID	HOST ADDR	0010h	00h	00h	00h	00h	AFh	CHECK SUM
OSD Menu Left	Function	Move OSD arrow to left.									
	Command Packet	A0h	CAM ID	HOST ADDR	0004h	00h	00h	00h	00h	AFh	CHECK SUM
	Return Packet	A0h	CAM ID	HOST ADDR	0004h	00h	00h	00h	00h	AFh	CHECK SUM
OSD Menu Right	Function	Move OSD arrow to right.									
	Command Packet	A0h	CAM ID	HOST ADDR	0002h	00h	00h	00h	00h	AFh	CHECK SUM
	Return Packet	A0h	CAM ID	HOST ADDR	0002h	00h	00h	00h	00h	AFh	CHECK SUM
OSD Menu Set	Function	Move to inside menu									
	Command Packet	A0h	CAM ID	HOST ADDR	0100h	00h	00h	00h	00h	AFh	CHECK SUM
	Return Packet	A0h	CAM ID	HOST ADDR	0100h	00h	00h	00h	00h	AFh	CHECK SUM
OSD Menu ESC	Function	Move to upper menu.									
	Command Packet	A0h	CAM ID	HOST ADDR	0200h	00h	00h	00h	00h	AFh	CHECK SUM
	Return Packet	A0h	CAM ID	HOST ADDR	0200h	00h	00h	00h	00h	AFh	CHECK SUM

DECLARATION OF CONFORMITY

Application of Council Directive(s)	2004 / 108 / EC
Manufacturer's Name	SAMSUNG TECHWIN CO., LTD
Manufacturer's Address	SAMSUNG TECHWIN CO., LTD
	42, SUNGJU-DONG CHANGWON-CITY,
	KYUNGNAM, KOREA, 641-716
European Representative Name	
European Representative Address	
Equipment Type/Environment	CCTV Camera
Model Name	SCZ-2370P
Beginning Serial NO.	C54N6V3Z300001X
Year of Manufacture	2010.03.24
Conformance to	EN 55022 : 2006
	EN 50130-4 : 2003

We, the undersigned, hereby declare that the equipment specified above conforms to the above Directive(s).

Manufacturer	SAMSUNG TECHWIN CO., LTD	Legal Representative in Europe
Signature	BJ Gu	Signature
Full Name	BONJENG GU	Full Name
Position	QUALITY CONTROL MANAGER	Position
Place	CHANGWON, KOREA	Place
Date	2010.03.24	Date

MEMO

MEMO

MEMO

SAMSUNG TECHWIN

SALES NETWORK

• **SAMSUNG TECHWIN CO., LTD.**
145-3, Sangdaewon 1-dong, Jungwon-gu, Seongnam-si Gyeonggi-do, Korea, 462-703
TEL : +82-31-740-8151~8 FAX : +82-31-740-8145

• **SAMSUNG TECHWIN AMERICA Inc.**
1480 Charles Willard St, Carson, CA 90746, UNITED STATES
Tol Free : +1-877-213-1222 FAX : +1-310-632-2195
www.samsungcctvusa.com

• **SAMSUNG TECHWIN EUROPE LTD.**
Samsung House, 1000 Hillswood Drive, Hillswood Business Park Chertsey, Surrey, UNITED KINGDOM KT16 OPS
TEL : +44-1932-45-5300 FAX : +44-1932-45-5325

www.samsungtechwin.com
www.samsungsecurity.com

P/No. : Z6806-1171-01A
VAN 10. 03